

# **Prospective evaluation of the effect of mandibular implant overdenture on Peri-implant Tissues**

## **Abstract:**

**Introduction:** Implant-supported over-dentures (IODs) are an accepted and predictable form of treatment for the edentulous jaw. The purpose of this prospective clinical study was to evaluate the effect of mandibular implant overdenture on Peri-implant Tissues

**Materials and Methods:** A prospective study was carried out with 24 edentulous patients (n = 24; mean age 67.13 years). In all patients, two dental implants were placed in the interforaminal region of the mandible and after a 3-month healing period overdentures were fabricated. Clinical and radiographic parameters were evaluated 6 and 12 month after completion of the prosthetic treatment. Implant loss, bleeding on probing, gingival recession, Attachment level and probing depth were assessed as clinical parameters. Peri-implant bone loss was assessed on dental radiographs taken with a paralleling technique. Peri-implant tissue health was assessed, and the presence of mucositis and peri-implantitis was recorded

**Results:** 24 patients who received 48 implants were evaluated. The average marginal bone loss of patients was 0.33mm after 6 month of evaluation and 0.63mm after one years. the mean probing depth was 1.89mm and 2.19mm respectively after 6 and 12 month of evaluation. No implants were lost and no peri implantitis occurred. the survival rate was 100% after one year of function.

**Conclusion:** Considering the limitations of this short term clinical study, two implants to retain mandibular overdentures seems to be a feasible treatment option with a high survival rate for patients with insufficient jawbone volume.

**Keywords:** dental implant, peri-implant disease, implant-supported over-denture, survival